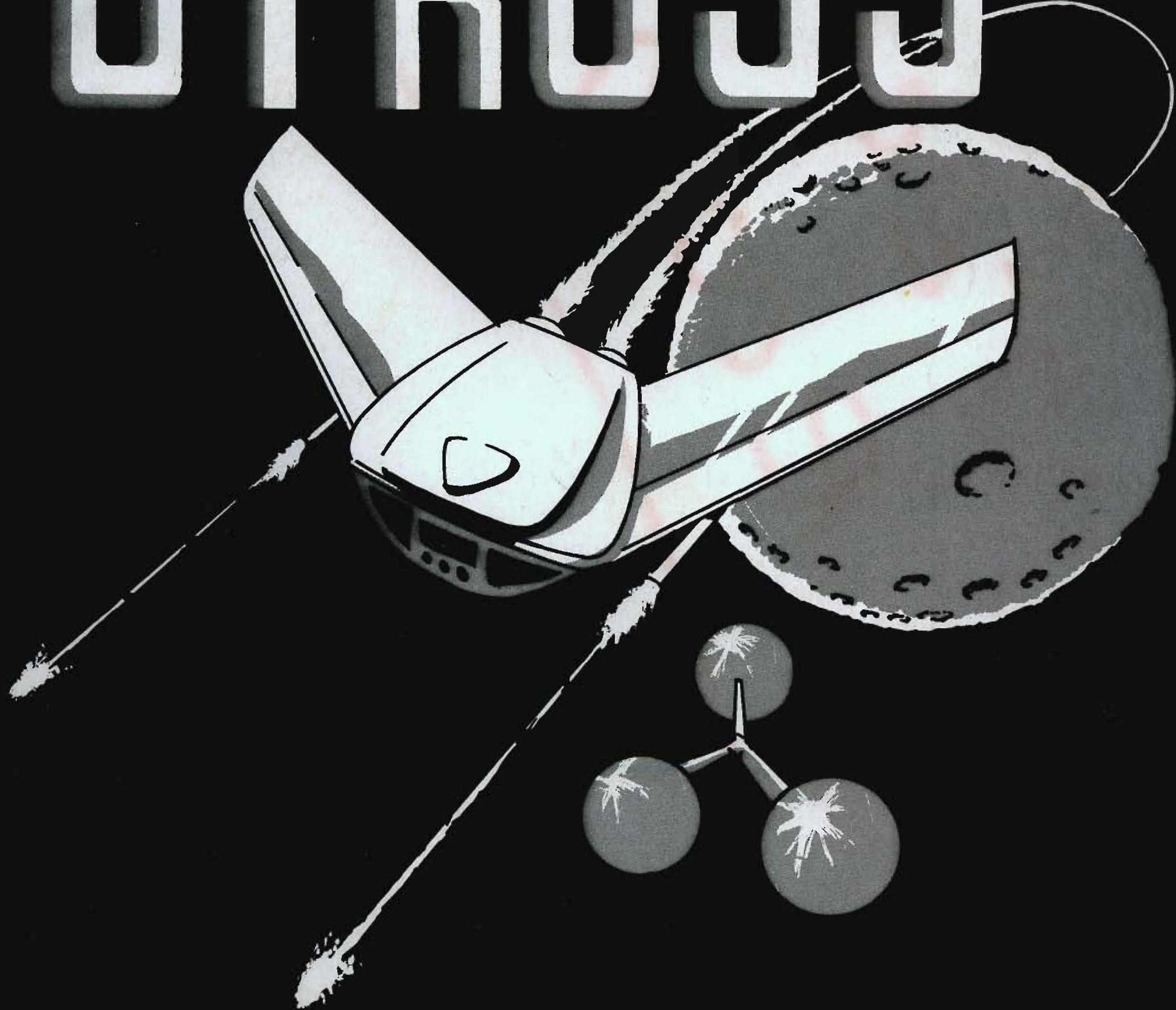
centuri inc.

MANUAL NO. 901-2162

GYRUSS©



SERVICE MANUAL

GYRUSS

CENTURI, INC.
245 W. 74th PLACE
HIALEAH, FLA. 33014

CUSTOMER SERVICE:

TEL. #(305) 558-5200 (IN FLORIDA)

TEL. #(800) 327-7710 (OUTSIDE FLORIDA)

TELEX: 803694 ANSB CENTURI CABLE: CENTURI

GYRUSS
TABLE OF CONTENTS

USER INFORMATION - F.C.C.

WARNING

THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY, AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE INTERFERENCE TO RADIO COMMUNICATIONS. AS TEMPORARILY PERMITTED BY REGULATION, IT HAS NOT BEEN TESTED FOR COMPLIANCE PURSUANT TO SUBPART J OF PART 15 OF F.C.C. RULES, WHICH ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST SUCH INTERFERENCE. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE INTERFERENCE IN WHICH CASE, THE USER AT HIS OWN EXPENSE WILL BE RQUIRED TO TAKE WHATEVER MEASURES MAY BE REQUIRED TO CORRECT THE INTERFERENCE.

INTRODUCTION

GYRUSS IS A MICROPROCESSOR BASED COIN-OPERATED ELECTRONIC GAME, THAT MAKES EXTENSIVE USE OF DIGITAL INTERGRATED CIRCUITRY AND TELEVISION MONITOR CONCEPTS. THIS MANUAL IS DESIGNED FOR THE USE OF MAINTENANCE TECHNICIANS WHO POSSES A GENERAL WORKING KNOWLEDGE OF SOLID-STATE CIRCUITRY, AND VIDEO MONITOR THEORY. ANY INDIVIDUAL NOT KNOWLEDGEABLE IN THESE AREAS SHOULD NOT ATTEMPT REPAIR OF THE ELECTRONIC PORTIONS OF THE GAME.

IN ADDITION TO THIS MANUAL AND TRAINING IN ELECTRONICS, TROUBLESHOOTING AND REPAIR WILL BE FACILITATED BY ACCESS TO GENERAL-TYPE HANDTOOLS, A MULTIMETER, A 50 OR 100 MHz OSCILLOSCOPE AND A LOGIC PROBE WOULD BE HELPFUL.

TECHNICAL ASSISTANCE IS AVAILABLE BY CALLING (305) 558-5200.

QUESTIONS OR COMMENTS CONCERNING GYRUSS OR ANY OF OUR GAMES ARE WELCOME AND SHOULD BE DIRECTED TO:

CENTURI, INC.
CUSTOMER SERVICE DEPARTMENT
#800-327-7710 (OUTSIDE THE STATE OF FL.)
(305) 556-5888 (IN FLORIDA)

NOTES

NEVER REPLACE ANY COMPONENTS WITH ANYTHING OTHER THAN THE EXACT REPLACEMENT PARTS.

NEVER REMOVE CIRCUIT BOARD CONNECTIONS WHILE POWER IS ON.

DO NOT REPLACE THE FUSE WITH ANYTHING OTHER THAN THE PROPER VALUE. A BLOWN FUSE INDICATES AN OVERLOAD CONDITION WITHIN THE GAME. REPLACING THE FUSE WITH A HIGHER VALUE CAN CAUSE SEVERE DAMAGE TO INTERNAL COMPONENTS IF AN OVERLOAD OCCURS.

ALWAYS CONSULT THE MANUAL BEFORE ATTEMPTING REPAIRS.

GYRUSS GAME PLAYING INSTRUCTIONS

Object Of Game;

Fly through the universe to reach earth.

Playing Instructions:

1. Fly spaceship around the circle orbit.
2. Fire to destroy enemy formations and alien objects appearing on screen.
3. Spaceships is destroyed when hit by enemies, bullets, satellites, meteors and electronic wave bands.
4. Double firepower for destroying the middle pink warping satellite.

"Chance Stage"

Destroy all enemy formations.

Enemies can not destroy spaceship.

Super Bonus

Destroy all four enemy formations.

GYRUSS

PLAY INSTRUCTION

*Fly your plane along the circle orbit using the 8-way joystick.

*Shoot the enemy formation flying from the depth of the screen. (Some enemy planes appear from outside of the screen at higher Phases.)

*Surviving enemy planes stand by in the depth of the screen. After four enemy formations have shown up, all the surviving enemy planes get united and attack on the player.

*The last two enemy planes try to escape. Shoot them quickly for 1000 points each.

*Destroy the three warping enemy satellites:

500	points	for	the	1st	one
1000	-	-	-	2nd	one
1500	-	-	-	3rd	one

*By destroying the center satellite (pink color) of the three, the player gets extra power and can shoot two bullets at one press of the shooting button. After the player has extra power, 1000, 1500 and 2000 points can be earned respectively for the first, second and third warping satellites.

*At higher phases, meteors appear which cannot be destroyed, and pairs of other satellites which radiate electromagnetic waves. The player can destroy the satellites for 200 points each.

*At the "Chance Stages," the enemies cannot defeat the player. 100 points can be earned by shooting one enemy plane. Destroy all the enemy planes in a formation for Bonus Points. The third phase and every fourth phase on are the Chance Stages. Bonus Points on each stage are as follows:

The 3rd phase	:	1000 points
7th	:	1500 points
11th	:	2000 points
15th	:	2500 points
19th and on	:	3000 points

Special Bonus of 10,000 points are awarded,(depending on Bonus point dip switch setting),by wiping out all the four formations.

OPTIONAL DIP SWITCH SETTINGS

1. Dip Switch No.1 (8P Dip Switch)

Credits

COin	Plays	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
1	1	Off	Off	Off	Off	Off	Off	Off	Off
1	2	On	Off	Off	Off	On	Off	Off	Off
1	3	Off	On	Off	Off	Off	On	Off	Off
1	4	On	On	Off	Off	On	On	Off	Off
1	5	Off	Off	On	Off	Off	Off	On	Off
1	6	On	Off	On	Off	On	Off	On	Off
1	7	Off	On	On	Off	Off	On	On	Off
2	1	On	On	On	Off	On	On	On	Off
2	3	Off	Off	Off	On	Off	Off	Off	On
2	5	On	Off	Off	On	On	Off	Off	On
3	1	Off	On	Off	On	Off	On	Off	On
3	2	On	On	Off	On	On	On	Off	On
3	4	Off	Off	On	On	Off	Off	On	On
4	1	On	Off	On	On	On	Off	On	On
4	3	Off	On	On	On	Off	On	On	On
Free Play		On	On	On	On	On	On	On	On

2. Dip Switch No. 2 (8P Dip Switch)

Number Of Spaceships

Number	SW1	SW2
* 3	Off	Off
4	On	Off
5	Off	On
256	On	On

Game Type

Style	SW3	Players
Table	Off	1 or 2 Players
Upright	On	Only 1 Player

Bonus Points

Bonus Points	SW4
50,000 Pts. and after every 70,000 Points	Off
*60,000 Pts. and after every 80,000 Points	On

2. Dip Switch No. 2 ,continues

Level of difficulty

Option	SW5	SW6	SW7
Very easy	off	off	off
Easy -1	on	off	off
" -2	off	on	off
" -3	on	on	off
Average	off	off	on
Difficult*	on	off	on
Very Difficult	off	on	on
Most Difficult	on	on	on

Audio Attraction

Sound Mode	SW8
NO sound in attract mode	off
Sound in attract mode	on*

3. Dip Switch No. 3

Music Mode	SW1
Music Off	Off
Music On	On *

* Denotes Normal Settings

INSTALLATION

Your game was shipped from the factory in ready-to-play condition. A brief inspection is suggested before the machine is removed from the carton. If there is damage to the shipping carton, contact the freight carrier for claim purposes. External damage could indicate possible damage to the cabinet and/or electronics components.

After the carton has been satisfactorily inspected, remove the machine from the shipping carton.

Examine the interior of the game for disconnected wires, cables, or harnesses. Make sure the electronic devices are securely mounted in their sockets, etc. Record the game serial number, since it will be required for reference and servicing.

ELECTRICAL REQUIREMENTS

Unless otherwise specified, this game is set to operate at 110 Volts A.C. (See Fig. 2 and 110/220 VAC conversion instructions.)

Power supply chasis schematic information and parts list are included in this manual.

110/220 VAC CONVERSION INSTRUCTIONS

This game contains a harness configuration which allows the machine to be operated from either a 110 VAC or 220 VAC, 50 H_Z or 60 H_Z power source. All games shipped from Centuri, Inc., are in the 110 VAC configuration. To change to the 220 VAC configuration follow the procedure below.

FIRST: Unplug the machine from the wall outlet to completely eliminate shock hazards.

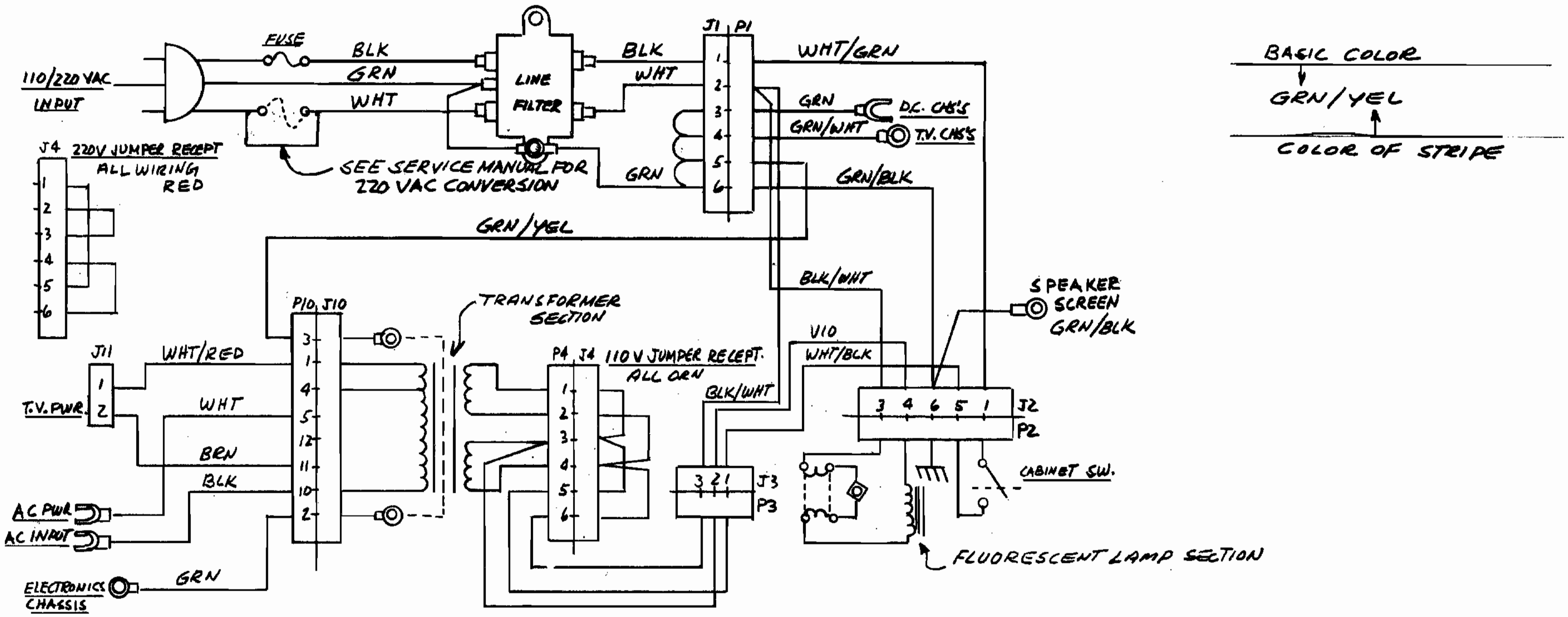
SECOND: Remove the single 3 AMP slow-blow fuse found in the A.C. Distribution Bracket, and install two, 1.5 AMP slow-blow fuses. Next cut the #18 AWG. white jumper at both ends of the fuse holder, and replace the cover.

THIRD: On the game power transformer, locate the "orange" jumper plug which is marked, 110 VAC. Unplug the "orange" jumper, and plug in the "red" jumper marked 220 VAC.

To revert back to 110 VAC, replace the components originally removed from the Steps above.

***NOTE: The common side of the A.C. Line must not be fused in the 110 VAC configuration - Replace the #18 AWG., white jumper wire.

(Refer also to FIG. 1, 110/220 POWER INTERCONNECT DIAGRAM, #904-0004).



REV. LET.	ECN NO.	REVISION	BY

TOLERANCES Unless Otherwise Specified

FRACTIONS	± 1/32
DECIMALS 2 PL	± .015
DECIMALS 3 PL	± .005
HOLES	+ .003 − .001
ANGLES	± 1/2°
SHT. MET BENDS	± 2°

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

centuri inc. HIALEAH, FLORIDA 33014

NAME 110/220V POWER INTERCONNECT DIAG

MATL'S.	HEAT TREAT.	FINISH

DWN.	APP'D.	DATE	SCALE	PART NO.	REV.
AAN		5-6-83		906-3129	

AF 17899B

ROUTINE MAINTENANCE & SERVICE

Because of the solid state electronic circuitry, this machine should require very little maintenance, and only occassional adjustments. However, it is necessary to take steps to insure this.

The volume control is located on the bottom side of the printed circuit board, farthest from the side of the cabinet, and can be accessed through the rear door.

The video monitor has been properly adjusted before shipping. Occassionally minor adjustments are necessary. Technical information, along with schematics, can be found in this manual. Adjustment controls for the monitor are located on the rear of the monitor.

"DO NOT MAKE ANY ADJUSTMENTS ON THIS MACHINE WHILE THE POWER IS ON!" This machine should only be adjusted by a "qualified" technician.

For Service Information, contact:

CENTURI, INC.

CUSTOMER SERVICE DEPARTMENT
#800-327-7710 (Outside the State of Fla.)
#305-556-5888 (In Florida)

POWER SUPPLY

The Computer Board in this game operates most efficiently and reliably when the power supply is set so the voltage on the Board is 5.0 Volts, ±0.1 Volts. To check this, place a meter across 5 Volts, and ground, at the edge connector. If necessary, adjust the screwdriver control on the power supply, so the meter reads between 4.9 and 5.1 Volts.

CABINET FRONT VIEW

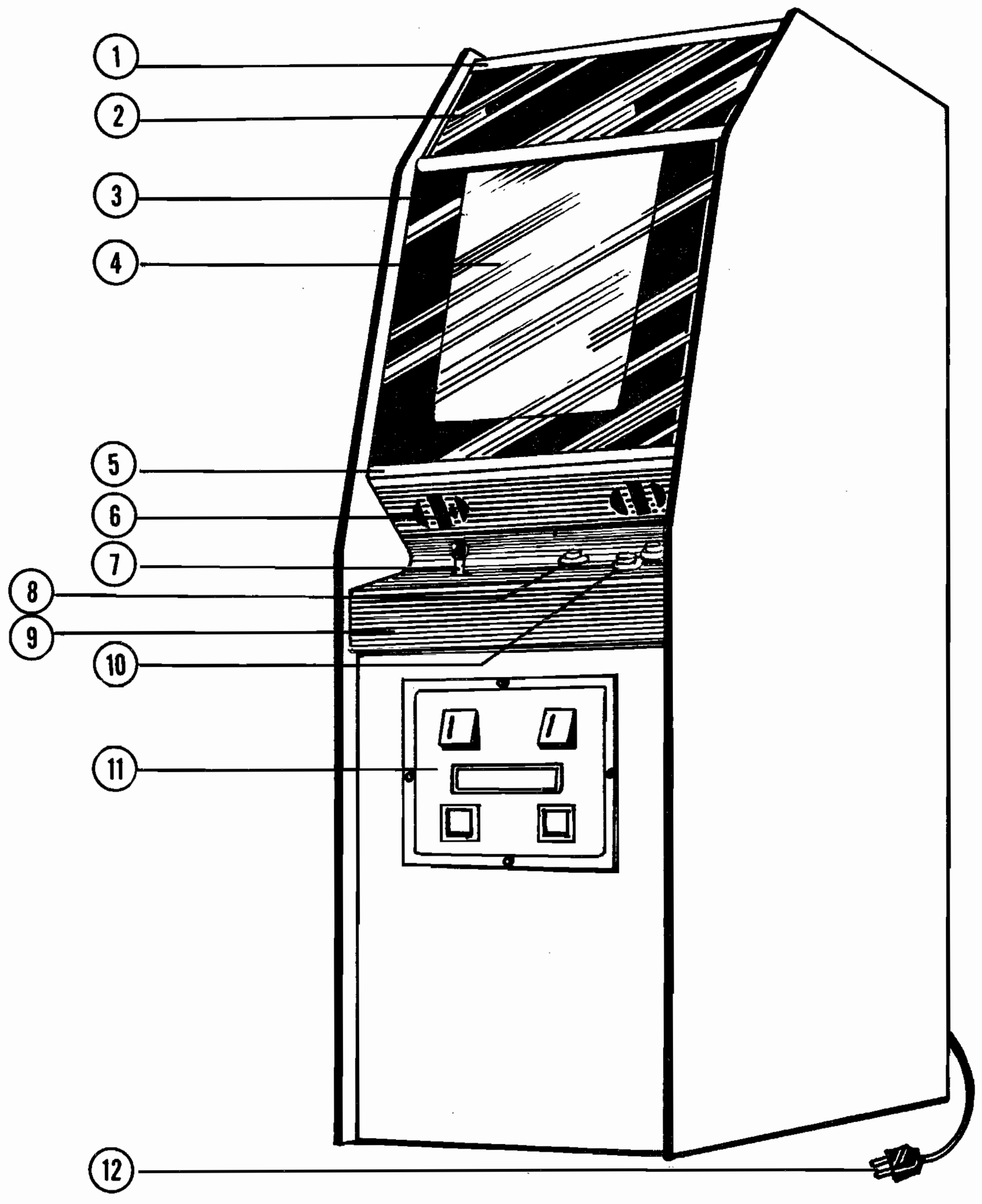


FIG. 2

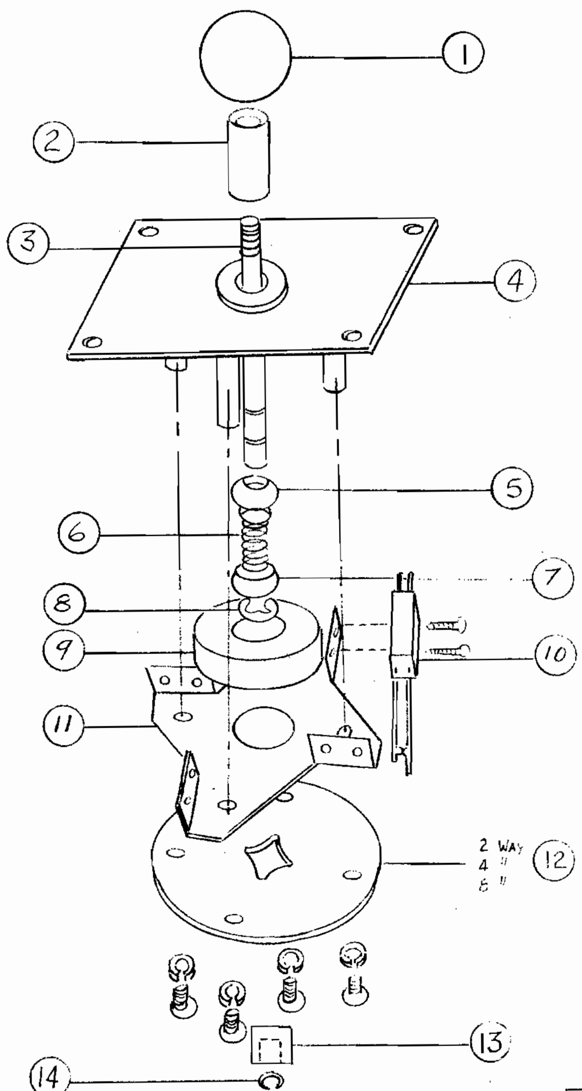
CABINET FRONT VIEW

PARTS LIST

ITEM	PART NUMBER	DESCRIPTION
1	302-2705	Marquee Top Holding Bracket
2	802-3109	Marquee, Gyruss
3	804-3126	Monitor Top Graphic Bezel
4	605-0975	Viewing Glass, #2094
5	302-2704	Glass Holding Bracket
6	403-1171	Speaker, 8 ohm, 6 Watts
7	702-1197	Joystick Ass'y, 8 Way
8	701-1171	Player 1 Start Button/ Fire Button
9	609-3171	Control Deck W/Overlay
10	701-1170	Player 2 Start Button
11	009-4694	Coin Door
12	402-1511	Power Line Cord

(FIG.3) EXPLODED VIEW OF JOYSTICK ASS'Y

2-4-8 WAY JOYSTICK



ITEM	QTY	PART Nº	DESCRIPTION
14	1	702-1200	C-RING
13	1	702-1199	ROLLEE
12	1	409-1194	8 WAY FUNCTION PLATE
11	1	409-1195	BOTTOM SUPPORT PLATE
10	4	409-1182	MOLDED BLADE SW., WICO
9	1	409-1191	NYLON ACTUATOR
8	1	409-1190	E.-RING
7	1	409-1189	BOTTOM BALL
6	1	409-1188	SPRING
5	1	409-1187	TOP BALL
4	1	409-1186	TOP PLATE WELDING ASS'Y
3	1	607-0029	SHAFT
2	1	607-0028	SPACER
1	1	409-1183	1 3/8 O.D. BALL

BILL OF MATERIAL

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES
Unless Otherwise Specified

FRACTIONS	±	1/32
DECIMALS 2 PL	±	.015
DECIMALS 3 PL	±	.005
HOLES	+	.003
	−	.001
ANGLES	±	1/2°
SHT. MET BENDS	±	2°

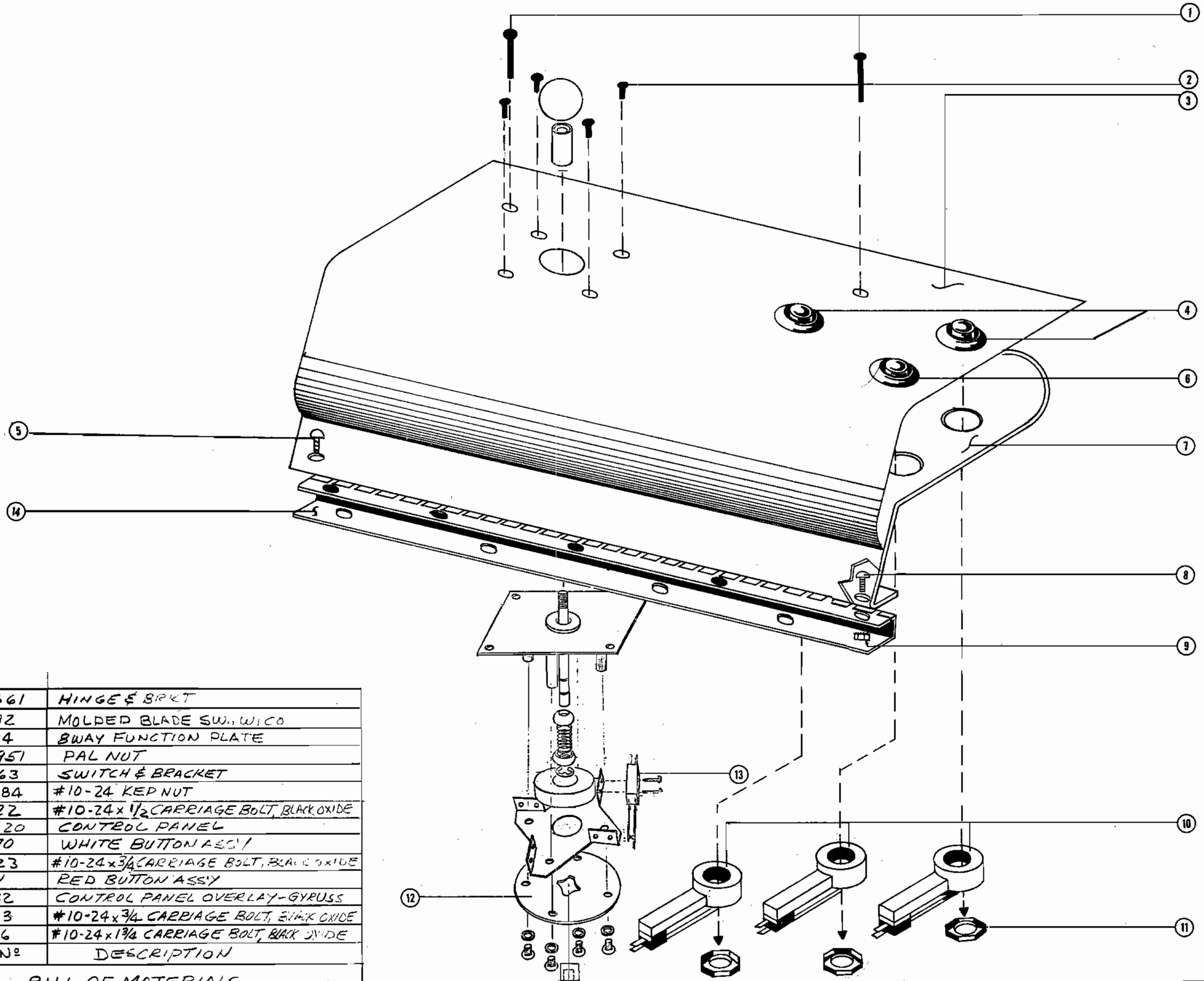
centuri INC. HIALEAH, FLORIDA 33014

NAME: JOYSTICK 8 WAY MONROE LEAF SW. ASS'Y

MATL'S. | HEAT TREAT. | FINISH

DWN. AAN | APP'D. | DATE 3-29-83 | SCALE ⌿ | PART NO. | REV.

AF 17899C



ITEM	QTY	PART Nº	DESCRIPTION
14	1	306-2661	HINGE & BRKT
13	4	409-1182	MOLDED BLADE SW., WICO
12	1	409-1194	8WAY FUNCTION PLATE
11	3	103-0951	PAL NUT
10	3	409-1163	SWITCH & BRACKET
9	11	115-2384	#10-24 KEP NUT
8	4	111-2322	#10-24x1/2 CARRIAGE BOLT, BLACK OXIDE
7	1	301-2520	CONTROL PANEL
6	1	701-1170	WHITE BUTTON ASS'Y
5	1	111-2323	#10-24x3/4 CARRIAGE BOLT, BLACK OXIDE
4	2	701-1171	RED BUTTON ASS'Y
3	1	801-3082	CONTROL PANEL OVERLAY-GYRUSS
2	4	111-2323	#10-24x3/4 CARRIAGE BOLT, BLACK OXIDE
1	2	111-2326	#10-24x1 3/4 CARRIAGE BOLT, BLACK OXIDE

BILL OF MATERIALS

EXPLODED VIEW OF CONTROL PANEL ASS'Y.

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES — Unless Otherwise Specified

FRACTIONS	± 1/32
DECIMALS 2 PL	± .015
DECIMALS 3 PL	± .005
HOLES	+ .003 − .001
ANGLES	± 1/2°
SHT. MET BENDS	± 2°

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

centuri INC. HIALEAH, FLORIDA 33014

NAME: EXPLODED VIEW CONTROL PANEL

MATL'S.	HEAT TREAT.	FINISH

DWN.	APP'D.	DATE	SCALE	PART NO.	REV.
Thang		3/18/83			

AF 17899C

2800-0 FRONT PLATE EXPLODED VIEW

25¢ COIN

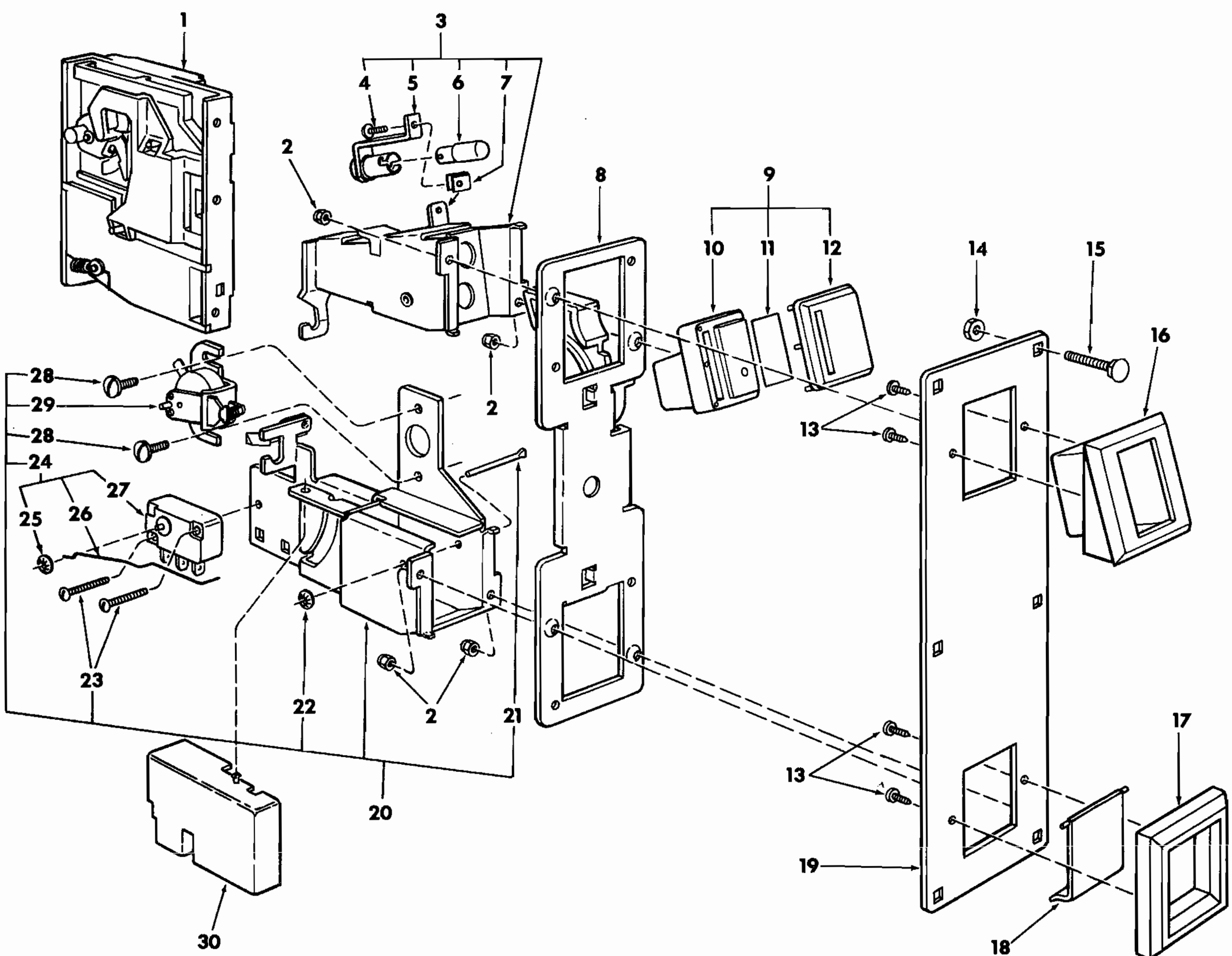


FIGURE 5

Index No.	Part No.	Description
1	5301-10	25¢ Coin Acceptor
2	400-4	#4-40 Self Locking Nut
3	404351	Coin Inlet Chute Assembly
4	110-4-6	4 x 3/8 Screw
5	904717	Lamp Socket
6	904716	#47 Lamp (6.3 Volt)
7	904712	Fastener
8	404464	Inner Panel/Lever Assembly
9	404348	Coin Return Button Assembly
10	904591	Coin Return Button
11	904703	25¢ Price Decal
12	904589-2	Reject Cover Button (25¢)
13	345-4-5	#4 x 5/16 Pan Head Screw
14	406-10	#10-24 Hex Nut (Mounting Hardware)
15	905022	#10-24 x 1-1/8 Carriage Bolt (Mounting Hardware)
16	904588	Coin Inlet Housing
17	904590	Coin Return Cover
18	904599	Coin Return Door
19	404463	Frontplate Assembly, 3-1/8" x 9-1/4"
20	404350	Coin Return Chute Assembly
21	905115	Bar
22	904936	Keeper
23	100-4-12	4-40 x 3/4 Screw
24	404353	Switch & Wire Assembly
25	900651	Retainer
26	904710-1	Switch Wire-Silver
27	904845	Switch
28	100-6-3	6-32 x 3/16 Screw
29	404354	12 Volt Crem Assembly
30	904762	Switch Cover

2800-0 FRONT PLATE EXPLODED VIEW

(FIGURE 5)

PARTS LIST

NO.	CENTURI P/N:	MANUFACTURING P/N:	DESCRIPTION:
1.	606-0966	5031-10	25¢ COIN ACCEPTOR
5.	606-0987	904717	LAMP SOCKET
6.	606-0988	904716	#47 LAMP (6.3 VOLT)
8.	606-0990	404464	INNER PANEL/LEVER ASS'Y.
10.	606-0967	904591	COIN RETURN BUTTON
11.	606-0968	904703	25¢ PRICE DECAL
12.	606-0969	904589-2	REJECT COVER BUTTON (25¢)
16.	606-0971	904588	COIN INLET HOUSING
17.	606-0975	904590	COIN RETURN BEZEL
18.	606-0972	904599	COIN RETURN DOOR
19.	606-0991	404463	FRONTPLATE ASS'Y.(3 1/8"x9¼")
21.	606-0986	905115	BAR
25.	606-0963	900651	RETAINER
26.	606-0964	904710-1	SWITCH-WIRE, SILVER
27.	409-1165	904845	SWITCH
29.	606-0983	404354	12 VOLT C.R.E.M. ASS'Y.
30.	606-0982	904762	SWITCH COVER
31.	606-1001	404604	COIN RETURN BUTTON ASS'Y.
32.	606-1000	905425-4	COIN INLET HOUSING

2800 SERIES COIN DOOR EXPLODED VIEW

25¢ U.S. COIN

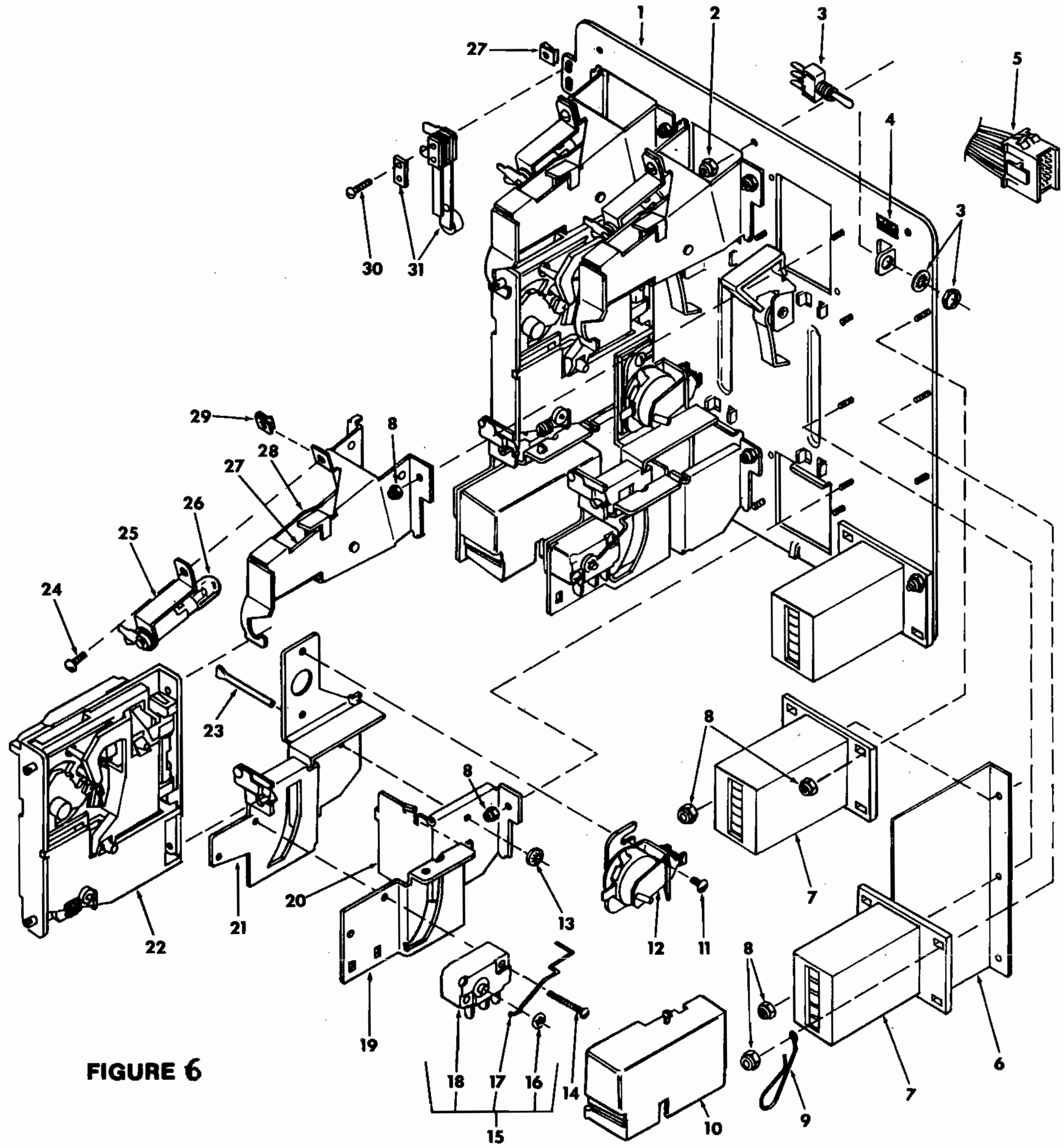


FIGURE 6

Index No.	Part No.	Description
1	404429	Inner Panel With Levers Sub-Assembly
2	400-8	Nut
3	904782	Toggle Switch
4	904706	Test Switch Decal
5		Custom Harness Assembly
6	904822	Insulation
7	404352	Coin Counter Assembly (6 Volt D.C.)
8	400-4	Nut
9	904722	Wire Key Holder
10	904762	Switch Cover
11	100-6-3	Screw
12	404354	C.R.E.M. Coil Assembly. 12 Volts D.C.
13	904936	Keeper
14	100-4-12	Screw
15	404353	Coin Switch Assembly for U.S. 25¢ Coin
16	900651	Retainer
17	904710-1	Silver Switch Wire — for U.S. 25¢ Coin
18	904845	Switch
19	904701	Coin Chute
20	904598	Coin Return Box
21	404428	Switch and C.R.E.M. Coil Bracket Assembly
22	5301-10	25¢ Acceptor
23	905115	Bar
24	110-4-6	Screw
25	904717	Miniature Bayonet-Base Lamp Socket
26	904716	#47 Lamp (6.3 Volt)
27	404418	Coin Inlet Chute Sub-Assembly
28	904594	Right Half of Coin Inlet Chute
29	904712	"U"-Type Fastener
30	116-4-8	Screw
31	904704	Slam Switch Assembly

2800 SERIES COIN DOOR EXPLODED VIEW

25¢ U.S. COIN

(FIGURE 6)

PARTS LIST

NO.	CENTURI P/N:	MANUFACTURING P/N:	DESCRIPTION:
1.	606-0978	404429	INNER PANEL w/LEVERS SUBASS'Y.
3.	409-1166	904782	TOGGLE SWITCH
4.	606-0979	904706	TEST SWITCH DECAL
5.	364-62-1000A	-------	CUSTOM HARNESS ASS'Y.
6.	606-0980	904822	INSULATION
7.	419-1662	404352	COIN COUNTER ASS'Y.
9.	606-0981	904722	WIRE KEY HOLDER
10.	606-0982	904762	SWITCH COVER
12.	606-0983	404354	C.R.E.M. COIL ASS'Y. (12 VOLT D.C.)
17.	606-0964	904710-1	SILVER SWITCH WIRE - FOR 25¢ U.S. COIN
18.	409-1165	904845	SWITCH
19.	606-0965	904701	COIN CHUTE
20.	606-0984	904598	COIN RETURN BOX
21.	606-0985	404428	SWITCH & C.R.E.M. COIL BRACKET ASS'Y.
22.	606-0966	5301-10	25¢ ACCEPTOR
23.	606-0986	905115	BAR
25.	606-0987	904717	MINIATURE BAYONET-BASE LAMP SOCKET
26.	606-0988	904716	#47 LAMP (6.3 VOLTS)
27.	606-0989	404418	COIN INLET CHUTE-SUBASS'Y.
31.	409-1167	904707	SLAM SWITCH ASSEMBLY

2800 SERIES COIN DOOR EXPLODED VIEW

25¢ U.S. COIN

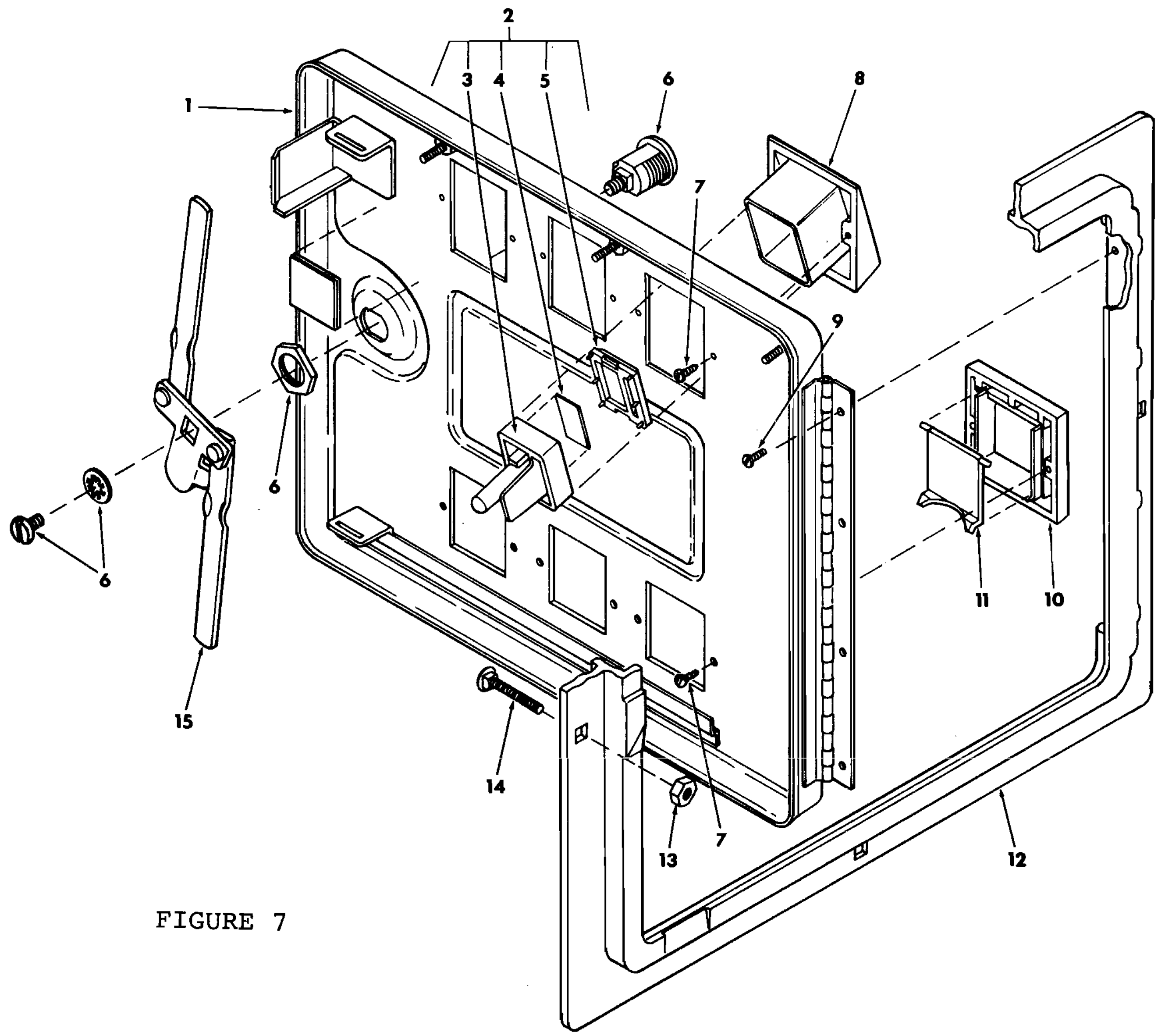


FIGURE 7

Index No.	Part No.	Description
1	404341	Coin Door Only (2 Coin)
	404341-1	Coin Door Only (3 Coin)
2	404348-1	Coin Return Button Assembly for U.S. 25¢ Coin
3	904591	Coin Return Button
4	904703	U.S. 25¢ Price Decal
5	904589-2	Coin Return Button Cover for U.S. 25¢ Coin
6	904707-1	Lock Assembly

Index No.	Part No.	Description
7	345-4-5	Screw
8	904588	Coin Button Housing
9	325-4-4	Screw
10	904590	Coin Return Bezel
11	904599	Coin Return Cover
12	904581	Coin Door Frame, 11-5/8" x 13-3/8" Mounts in a 10-3/8" x 12-3/16" Opening
13	406-416	Hex Nut
14	904734	Carriage Bolt
15	404357	Locking Arm Assembly

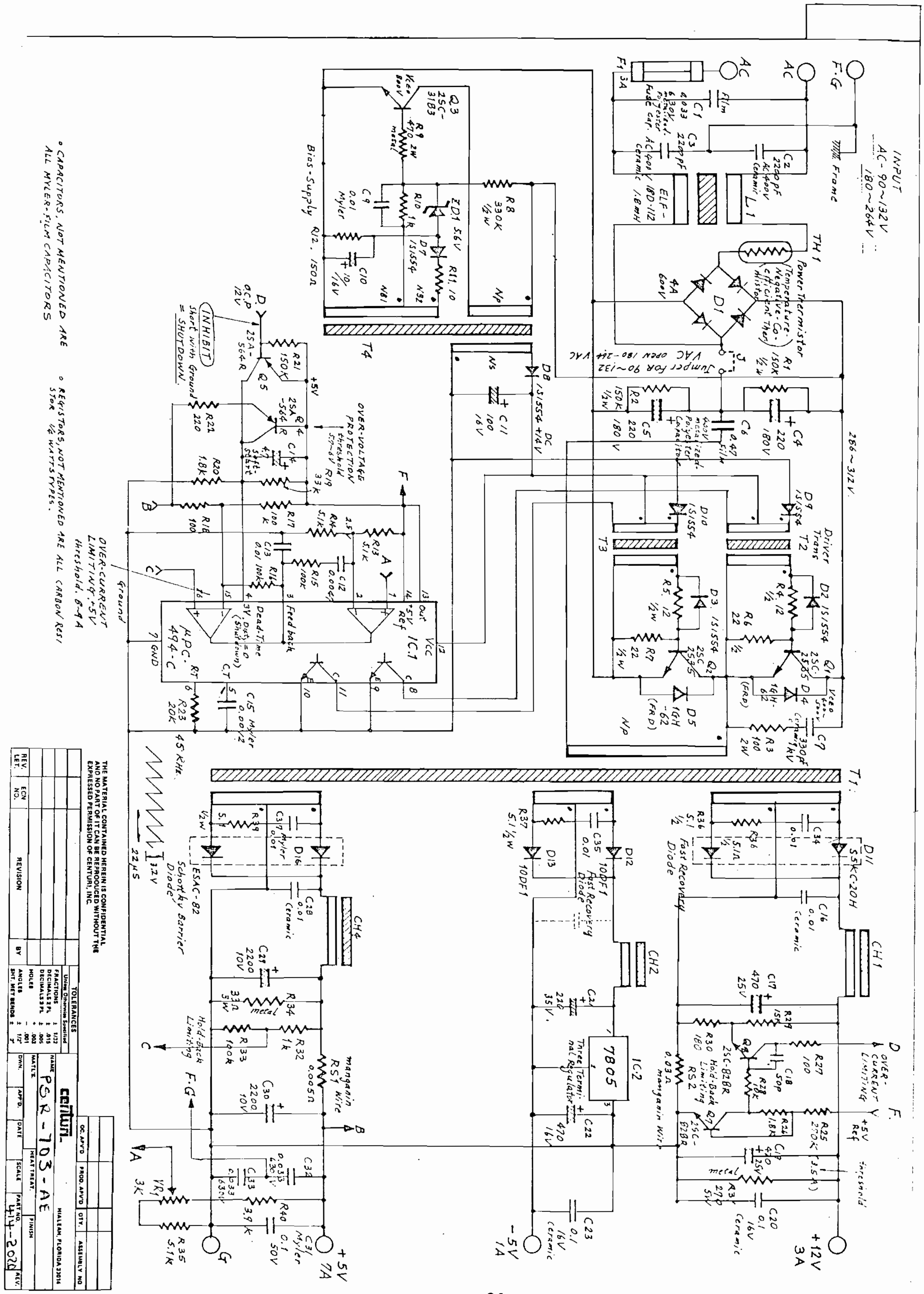
2800 SERIES COIN DOOR EXPLODED VIEW

25¢ U.S. COIN

(FIGURE 7)

PARTS LIST

NO.	CENTURI P/N:	MANUFACTURING P/N:	DESCRIPTION:
1.	606-0974	404341	COIN DOOR ONLY (2 COIN)
2.	606-0976	404348-1	COIN DOOR BUTTON ASS'Y. FOR U.S. 25¢ COIN
3.	606-0967	904591	COIN RETURN BUTTON
4.	606-0968	904703	U.S. 25¢ PRICE DECAL
5.	606-0969	904589-2	COIN RETURN BUTTON COVER
6.	606-0970	904707-1	LOCK ASSEMBLY w/KEYS
8.	606-0971	904588	COIN BUTTON HOUSING (INLET HOUSING)
10.	606-0975	904590	COIN RETURN BEZEL
11.	606-0972	904599	COIN RETURN COVER
12.	606-0973	904581	COIN DOOR FRAME (11 5/8"x12 3/8")
15.	606-0977	404357	LOCKING ARM ASSEMBLY
16.	606-1001	404604	COIN RETURN BUTTON ASS'Y.
17.	606-1000	905425-4	COIN INLET HOUSING


INPUT
AC-90~132V
180~264V
+12V
3A
+5V
7A
-5V
1A
7805
IC.2
IC.1
μPC 494-C
T1
T2
T3
T4
CH1
CH2
CH4
Bias-Supply
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centuri
HIALEAH, FLORIDA 33016
PSR-703-AE
414-2020
TOLERANCES
REVISION

Power Supply PSR-703AE

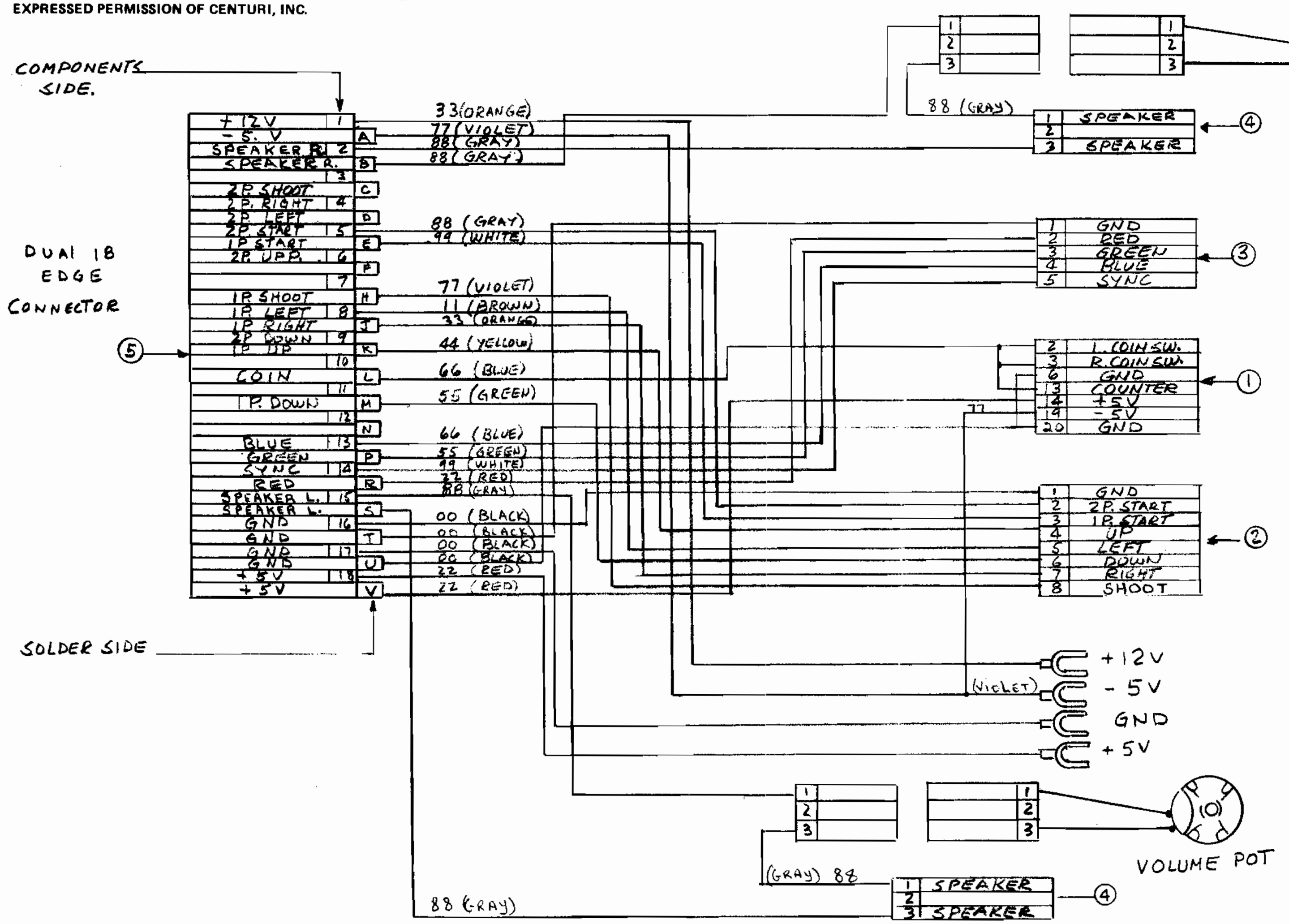
PARTS LIST (414-2020)

Symbol	Description	Qty
D1	Bridge Stack, RB-40, 600V	1
D4,D5	Fast Recovery Diode, 1GH62	2
D2,D3,D7, D8,D9,D10	Switching Diode, 1S1554	6
D11	Fast Recovery Diode, S5KC20H	1
D12,D13	Fast Recovery Diode, 10DF1	2
D16	Schotky Barrier Diode, C8P030	1
ZD1	Zener Diode, 05Z, 5.6V, 500mw	1
Q1,Q2	Power Transistor, 2SC2553	2
Q3	Power Transistor, 2SC2831	1
Q4,Q5	Transistor, 2SA564R	2
Q6,Q7	Transistor, 2SC828R	2
IC 1	Switching Control, UPC494C	1
IC 2	Regulator IC, 7805 (1A)	1
T1	Power Transformer, SM2335	1
T2,T3	Driver Transformer, SM2215B	2
T4	Power Transformer (Sub) SM2376	1
CH1	Choke Transformer, SM2219	1
CH2	Choke Transformer, SM2376B	1
CH4	Choke Transformer, SM2366	1
L1	AC Line Filter, ELF-18D-112	1
TH1	Power Thermistor, TD18-010	1
C2,C3	Ceramic Capacitor, 2200pf, AC400V	2
C1	Capacitor, Metalized, 0.033mf, 600V	1
C6	" " , 0.47mf, 50V	1
C15	" , Mylar, 0.001mf, 50V	1
C9,C13,C34, C35,C37	" " , 0.01mf	5
C12	" " , 0.0047mf	1
C31	" " , 0.1mf	1
C18	Capacitor, Ceramic, 50pf, 50V	1
C7	" " , 330pf, 1kv	1
C16,C28	" " , 0.01mf, 16V	2
C20,C23	" " , 0.1mf, 16V	2
C14	Capacitor,Electrolytic, 4.7mf, 25V	1
C10	" " , 10mf, 16V	1
C11	" " , 100mf, 16V	1
C21	" " , 220 mf, 35V	1
C22	" " , 470mf, 16V	1
C17,C19	" " , 470mf, 25V	2
C29,C30	" " , 2200mf, 10V	2
C4, C5	" " , 220mf, 180V	2
R31	Resistor,Cement, 270 ohm, 5W	1
R34	" , Oxide Metal Film, 33 ohm, 3W	1
R9	" " " " , 470 ohm,2W	1
R3	" " " " , 100 ohm,2W	1

POWER SUPPLY PSR-703AE

PART LIST (414-2020)

Symbol	Description	Qty
R36,R37,R39	Resistor, Carbon, 5.1 ohm, 1/2 W	3
R4,R5	" " , 12 ohm, 1/2 W	2
R6,R7	" " , 22 ohm, 1/2 W	2
R1,R2	" " , 150K ohm, 1/2 W	2
R8	" " , 330K ohm, 1/2 W	1
R12	" " , 150 ohm, 1/4 W	1
R10	" " , 1K ohm, 1/4 W	1
R11	" " , 10 ohm, 1/4 W	1
R40	" " , 3.9K ohm, 1/4 W	1
R35	" " , 5.1K ohm, 1/4 W	1
R18,R27	" " , 100 ohm, 1/4 W	2
R30	" " , 180 ohm, 1/4 W	1
R22	" " , 220 ohm, 1/4 W	1
R32	" " , 1K ohm, 1/4 W	1
R26	" " , 1.8K ohm, 1/4 W	1
R12,R14	" " , 5.1K ohm, 1/4 W	2
R28	" " , 10K ohm, 1/4 W	1
R29	" " , 15K ohm, 1/4 W	1
R23	" " , 20K ohm, 1/4 W	1
R19	" " , 6.8K ohm, 1/4 W	1
R15,R16,R17,R33	" " , 100K ohm, 1/4 W	4
R21	" " , 150K ohm, 1/4 W	1
R25	" " , 270K ohm, 1/4 W	1
R20	" " , 390 ohm, 1/4 W	1
VR1	Semi-fixed resistor, GFD6-B 3K	1
RS1	Manganese Metal Wire, A-2145	1
RS2	Manganese Metal Wire, 1.0 Ø x 55m/m	1
F1	Fuse, 3 amp.	1
	Fuse Holder, F-207	1



IT	QTY	PART Nº	DESCRIPTION
22	18	417-1601	TY-WRAPS 4"
21	80"	402-1410	" " WHITE " "
20	80"	402-1498	" " GRAY " "
19	103"	402-1487	" " VIOLET " "
18	108"	402-1476	" " BLUE " "
17	85"	402-1465	" " GREEN " "
16	48"	402-1454	" " YELLOW " "
15	69"	402-1443	" " ORANGE " "
14	81"	402-1432	" " RED " "
13	48"	402-1421	" " BROWN " "
12	140"	402-1509	" " BLACK 22AWG
11	21"	402-1409	" " BLACK " "
10	21"	402-1332	INSUL WIRE RED 18AWG
9	24	401-1261	CRIMP TERM (MOLEX 09-03-0303)
8	7	401-1234	FEMALE PIN (AMP # 350665-1)
7	21	401-1223	FEMALE PIN (MOLEX # 02-09-1116)
6	4	401-1246	INSULATED OPEN LUG
5	1	401-1247	DUAL 18 EDGE CONN. (MOLEX 09-59-5181)
4	4	401-1225	3 PIN RECEPT (MOLEX # 03-09-1031)
3	1	401-1231	6 PIN RECEPT (MOLEX # 03-09-1061)
2	1	401-1232	12 PIN RECEPT (MOLEX # 03-09-1125)
1	1	401-1233	24 PIN RECEPT (AMP # 1-320246-9)

BILL OF MATERIAL

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES
Unless Otherwise Specified

FRACTIONS	± 1/32
DECIMALS 2 PL	± .015
DECIMALS 3 PL	± .005
HOLES	+ .003 − .001
ANGLES	± 1/2°
SHT. MET BENDS	± 2°

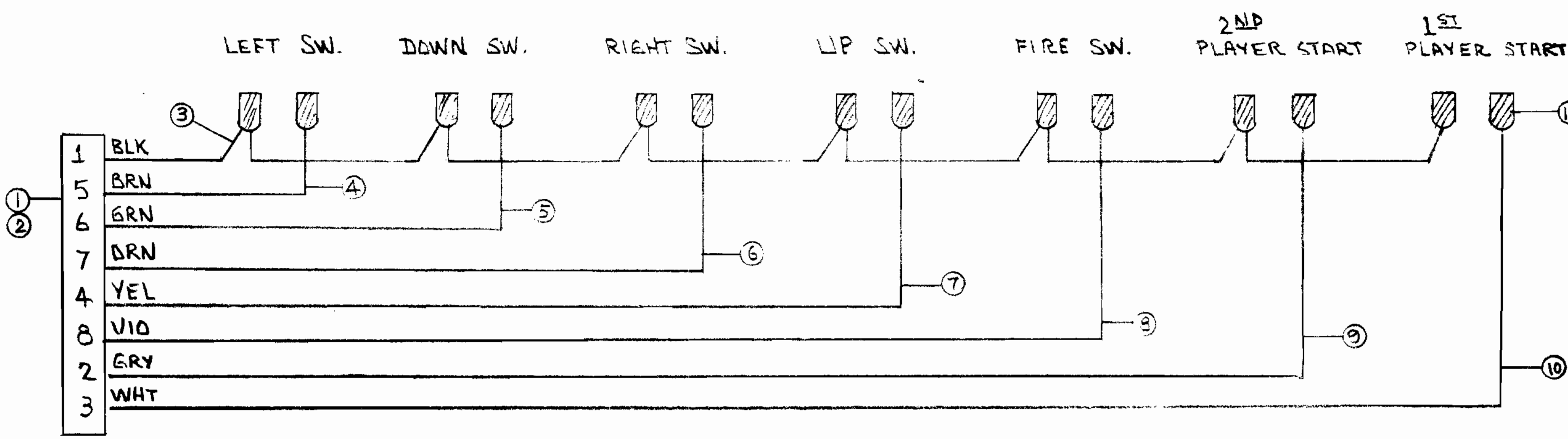
centuri inc. HIALEAH, FLORIDA 33014

NAME: CPU HARNESS, GYRUSS U/R

MATL'S. | HEAT TREAT. | FINISH

DWN. AAN | APP'D [signature] | DATE 4-19-83 | SCALE X | PART NO. 008-4899 | REV

AF 17899B



ITEM	QTY	PART No.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
6	24"	402-1443	22 AWG ORANGE STRANDED WIRE	12	A/R	417-1601	4" TIE WRAP
5	24"	402-1465	22 AWG GREEN STRANDED WIRE	11	14	401-1302	Q-95 ETC 3/16" PUSH ON TERMINAL
4	29"	402-1421	22 AWG BROWN STRANDED WIRE	10	38"	402-1410	22 AWG WHITE STRANDED WIRE
3	87"	402-1509	22 AWG BLACK STRANDED WIRE	9	35"	402-1498	22 AWG GRAY STRANDED WIRE
2	8	401-1222	02-09-2116 MOLEX MALE PIN	8	33"	402-1487	22 AWG VIOLET STRANDED WIRE
1	1	401-1230	03-09-2122 MOLEX 12 PIN PLUG.	7	31"	402-1454	22 AWG YELLOW STRANDED WIRE

BILL OF MATERIALS

REV. LET.	ECN NO.	REVISION	BY

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

TOLERANCES
Unless Otherwise Specified

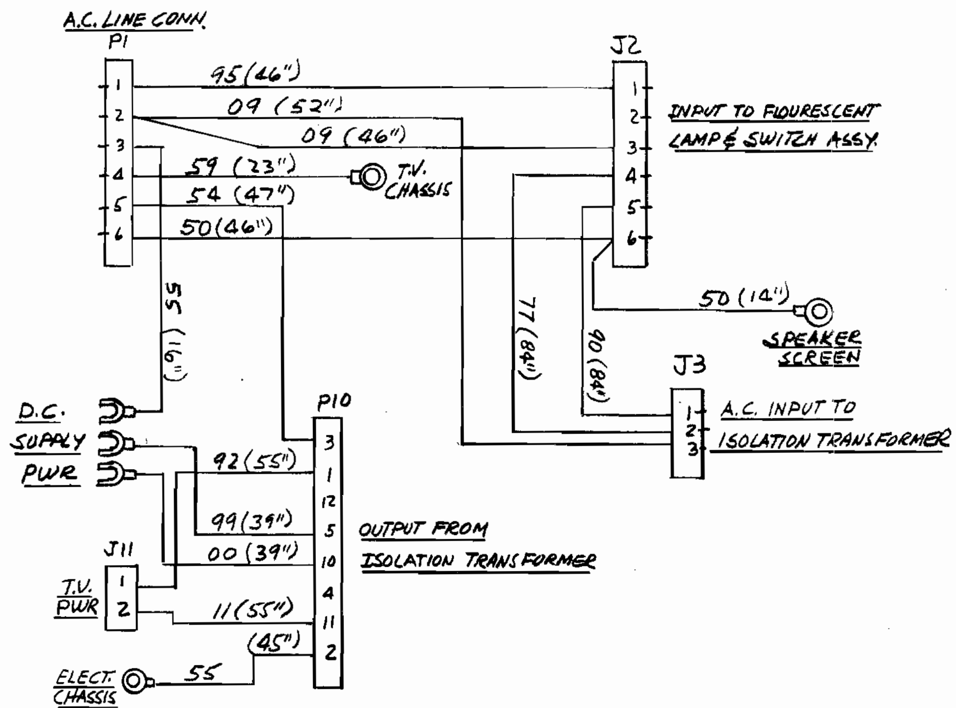
FRACTIONS	±	1/32
DECIMALS 2 PL	±	.015
DECIMALS 3 PL	±	.005
HOLES	+	.003
	−	.001
ANGLES	±	1/2°
SHT. MET BENDS	±	2°

centuri inc. HIALEAH, FLORIDA 33014

NAME: CONTROL PANEL HARNESS

MATL'S. | HEAT TREAT. | FINISH

DWN. [signature] | APP'D. [signature] | DATE 5-9-83 | SCALE X | PART NO. 008-4878 | REV.



ITEM	QTY	PART Nº	DESCRIPTION
22	29	417-1601	4" TY-WRAP
21	55"	402-1402	WHITE/RED STRIPE #18 AWG.
20	55"	402-1321	BROWN WIRE #18 AWG.
19	46"	402-1405	WHITE/GREEN STRIPE #18 AWG.
18	23"	402-1369	GREEN/WHITE STRIPE #18 AWG.
17	47"	402-1364	GREEN/YELLOW STRIPE #18 AWG.
16	60"	402-1360	GREEN/BLACK STRIPE #18 AWG.
15	98"	402-1319	BLACK/WHITE STRIPE #18 AWG.
14	84"	402-1400	WHITE/BLACK STRIPE #18 AWG.
13	84"	402-1387	VIOLET WIRE #18 AWG.
12	61"	402-1365	GREEN WIRE #18 AWG.
11	39"	402-1310	WHITE WIRE #18 AWG.
10	39"	402-1409	BLACK WIRE #18 AWG.
9	1	401-1225	3 PIN RECP., MOLEX
8	10	401-1243	FEMALE PIN, MOLEX
7	12	401-1242	MALE PIN, MOLEX
6	3	401-1246	OPEN LUG 16-22 AWG, ETC.
5	3	401-1201	RING LUG, HOLLINS.
4	1	401-1268	2 PIN RECP., MOLEX
3	1	401-1229	6 PIN PLUG, MOLEX
2	1	401-1231	6 PIN RECP. MOLEX
1	1	401-1230	12 PIN PLUG, MOLEX

BILL OF MATERIAL

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES Unless Otherwise Specified		
FRACTIONS	±	1/32
DECIMALS 2 PL	±	.015
DECIMALS 3 PL	±	.005
HOLES	+	.003
	−	.001
ANGLES	±	1/2°
SHT. MET BENDS	±	2°

centuri inc. HIALEAH, FLORIDA 33014

NAME CABINET POWER HARNESS				
MATL'S.		HEAT TREAT.	FINISH	
DWN. AAH	APP'D.	DATE 5-6-83	SCALE	PART NO. 008-4901	REV.

AF 17898

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